

REMARKS

The claims now pending in the application are Claims 1 to 12, the independent claims being Claims 1 and 9. Claims 1 and 9 have been amended.

In the Official Action dated January 17, 2003, Claims 1 to 12 were rejected under 35 U.S.C. § 102(b), as anticipated by U.S. Patent No. 5,047,847 (Toda).

Reconsideration and withdrawal of the rejection respectfully are requested in view of the above amendments and the following remarks.

The rejection of the claims over the cited art respectfully is traversed. Nevertheless, without conceding the propriety of the rejection, Claims 1 and 9 have been amended herein more clearly to recite various novel features of the present invention, with particular attention to the Examiner's comments. Support for the proposed amendments may be found in the original application. No new matter has been added.

In one aspect, as now recited in independent Claim 1, the present invention relates to a camera having a physical element that can change a light transmission factor throughout the physical element. Photoelectric conversion means receives an optical image transmitted through the physical element at a position of an imaging plane and converts the optical image into an electrical image signal. Memory means stores correction information to correct a change in an optical characteristic of the physical element with respect to a change of the light transmission factor throughout the physical element. Control means corrects the electrical image signal output from the photoelectric conversion means using the correcting information read out from the memory means in accordance with the current

light transmission factor throughout the physical element, and controls drive of the physical element according to the corrected electrical image signal.

In a similar aspect, as now recited in independent Claim 9, the present invention relates to a camera comprising a physical element that can change a light transmission factor throughout the physical element. Photoelectric conversion means receives an optical image transmitted through the physical element at a position of an imaging plane to convert the optical image into an electrical image signal and is capable of adjusting at least one of light accumulation time and sensitivity. Memory means stores correcting information for an output level change of the photoelectric conversion means caused by a change in an optical characteristic of the physical element with respect to a change of the light transmission factor throughout the physical element. Correcting means corrects the electrical image signal output from the photoelectric conversion means using the correction information read out from the memory means in accordance with the current light transmission factor throughout the physical element. Exposure amount adjustment means controls the exposure amount by a combination of adjusting at least one of the light transmission factor and the light transmission amount of the physical element according to the electrical image signal corrected by the correcting means and adjusts at least one of the light accumulation time and the sensitivity of the photoelectric conversion means.

Amended independent Claims 1 and 9 clearly recite that a camera of the present invention stores in memory correction information for an output level change of photoelectric conversion means caused by a change in an optical characteristic of the physical element with respect to a change of light transmission factor throughout a physical

element, and corrects the image signal output from the photoelectric conversion means using the correction information which is read out from the memory in accordance with the current light transmission factor throughout the physical element. As shown in Fig. 5, by way of example, in one embodiment the present invention uses correction information stored in an LUT 41 to correct a level of an output of an image pickup element 10 using a multiplier 36 and reads out such correction information from the LUT 41 in accordance with a current light transmission factor of a physical element (i.e., a drive voltage currently applied from a drive control circuit 42 to the physical element 9EC; see, e.g., page 20, lines 9 to 14, page 22, lines 17 to 22 and page 24, lines 2 to 4).

Applicant submits that the prior art fails to anticipate the present invention. Moreover, Applicant submits that there are differences between the subject matter sought to be patented and the prior art, such that the subject matter taken as a whole would not have been obvious to one of ordinary skill in the art at the time the invention was made.

The Toda '847 patent relates to an endoscope using liquid crystal devices different in response frequency in an image forming optical system, and discloses an image forming system including a liquid crystal assembly consisting of a plurality of liquid crystals. However, Applicant submits that the Toda '847 patent fails to disclose or suggest at least the above-discussed features of the present invention.

In the Official Action, the Examiner refers to Fig. 45 of the Toda '847 patent and asserts that the claims can be read on a control structure of a physical element 412 shown therein. This control structure includes a memory 438, an integrator 434, a CPU 437 and a drive circuit 439.

The memory 438 stores a drive voltage of an LC iris 412, corresponding to an iris value obtained from an output of the integrator 434 (see, col. 30, lines 47 to 56); accordingly, Applicant submits that the Toda '847 patent fails to teach the memory means recited in amended independent Claims 1 and 9. As described above, the correction information is level correction data of an output of an image pickup element.

In addition, the data stored in the memory 438 is read out in accordance with the output of the integrator 434 to provide the drive voltage to be supplied to the LC iris 412. This is in sharp contrast to the control means recited in amended independent Claims 1 and 9. The claimed invention includes the feature of reading out the correction information from the memory 41 in accordance with the drive voltage currently supplied from the drive control circuit 42 to the physical element 9EC to attain the "current light transmission factor" throughout the physical element.

Thus, Applicant submits the Toda '847 patent fails to disclose or suggest at least the combined feature of memory means and control means functioning together, as disclosed and claimed in the present application (Claims 1 and 9).

A review of the other art of record has failed to reveal anything which, in Applicant's opinion, would remedy the deficiencies of the art discussed above, as references against the independent claims herein.

For the above reasons, Applicant submits that independent Claims 1 and 9 are allowable over the cited art.

Claims 2 to 8 and 10 to 12 depend from Claims 1 and 9, respectively, and are believed allowable for the same reasons. Moreover, each of these dependent claims

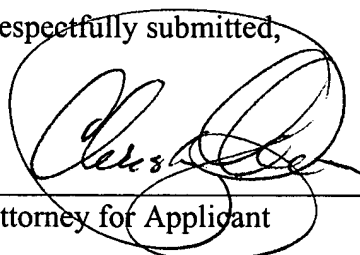
recites additional features in combination with the features of its respective base claim, and is believed allowable in its own right. Individual consideration of the dependent claims respectfully is requested.

Applicant respectfully requests that the present Amendment be entered and considered under 37 CFR 1.116. Applicant believes that the proposed amendments merely are formal or minor in nature, reduce the number of issues for consideration, and place the application in condition for allowance. Applicant submits that the present amendments were necessitated by the Examiner's comments in the Official Action, and were not previously made because Applicant believes the prior claims are allowable.

Applicant believes that the present Amendment is fully responsive to each of the points raised by the Examiner in the Official Action, and submits that the application is in allowable form. Favorable consideration of the claims and passage to issue of the present Application at the Examiner's earliest convenience earnestly are solicited.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



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Amendments in a Revised Format Now Permitted

Office of Patent Legal Administration << Pre-OG Notices << << Amendments in a Revised Format Now Permitted

The United States Patent and Trademark Office (USPTO or Office) is permitting applicants to submit amendments in a revised format as set forth herein. The revised amendment format is essentially the same as the amendment format that the Office is considering adopting via a revision to 37 CFR 1.121 (Manner of Making Amendments). The revision to 37 CFR 1.121 (if adopted) will simplify amendment submission and improve file management. The Office plans to adopt such a revision to 37 CFR 1.121 by July of 2003, at which point compliance with revised 37 CFR 1.121 will be mandatory.

The revised amendment format is an expansion of the special amendment process instituted for a prototype Electronic File Wrapper program described in USPTO ANNOUNCES PROTOTYPE OF IMAGE PROCESSING, 1265 Off. Gaz. Pat. Office 87 (Dec. 17, 2002) ("Prototype Announcement"). The special amendment process (which was limited to claims) has proven overwhelmingly acceptable to applicants participating in the prototype and beneficial to examiners. The revised amendment format provides for amendments to be made to the specification and the drawings in addition to the claims.

Effective immediately, all applicants, including applicants participating in the prototype, may submit amendments using the revised amendment format set forth herein. Applicants may wish to submit all amendments in the revised amendment format because: (1) it will facilitate transition to a revised amendment format when it becomes mandatory, (2) inconsistent versions of claim amendments (clean and marked-up) will be avoided, and (3) time and resources will be saved.

WAIVER of 37 CFR 1.121

The provisions of 37 CFR 1.121(a), (b), (c) and (d) are waived for amendments to the **claims, specification, and drawings** in all applications in all Technology Centers where the amendments comply with the revised amendment format detailed below. Note: The revised amendment format (and the waiver) does not apply to 37 CFR 1.121(h) and (i) which indicate that amendments to reissue applications and reexamination proceedings are governed by 37 CFR 1.173 for reissue applications and 37 CFR 1.530 (d)-(k) for *ex parte* and *inter partes* reexaminations.

In addition, the WAIVER indicated in the above mentioned Prototype Announcement for the limited (claims only) amendment process of that prototype is also expressly continued and amendments in applications (other than reissue applications) in all Technology Centers that comply with the requirements in that announcement will be acceptable.

REVISED AMENDMENT FORMAT**I. Begin Sections on Separate Sheets:**

Each section of an amendment paper (e.g., Amendments to the Specification, Amendments to the Claims, Remarks) shall begin on a separate sheet to facilitate separate indexing and electronic scanning of the document.

For example, each of the following four sections of an amendment paper must start on a separate sheet:

- a.) Introductory Comments

- b.) Amendments to the Specification
- c.) Amendments to the Claims
- d.) Remarks

II. Submit Only One Version (with markings) of an Amended Part:

The requirement to provide two versions of a replacement paragraph, section, or claim (a clean version and a marked up version), as set forth in current 37 CFR 1.121, is waived where the format set forth below is followed.

III. Amendments to the Claims

A. A Complete Listing of Claims is Always Required:

If an amendment adds, changes or deletes any claim, a detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remains under examination in the application, must be presented, and the amendment to the claims is expressed in the listing. The listing shall be presented as follows:

1. Ascending Order and Status Identifier Required

The listing shall be provided in sequential ascending numerical order (beginning with claim 1). A status identifier shall be provided for every claim in a parenthetical expression following the claim number (e.g., "Claim 1. (original)"). A list of acceptable status identifiers is set forth in part B, below. The text of **all** claims under examination shall be submitted each time any claim is amended. Cancelled and withdrawn claims should be indicated by only the claim number and status. The text of cancelled or withdrawn claims should not be presented.

2. Markings in Currently Amended Claims Required

All claims *being currently amended* shall be submitted with markings to indicate the changes that have been made relative to the immediate prior version of the claims. The changes in any amended claim should be shown by strikethrough (for deleted matter) or underlining (for added matter). No separate "clean" version should be submitted for currently amended claims, as this requirement has been eliminated. **Markings should only be made in claims being currently amended in an amendment paper.**

3. Only Clean Text Required for Other Claims Under Examination.

The text of pending claims *not being currently amended* that are under examination shall be presented in a clean version in the listing. Any claim presented in clean version constitutes an assertion that it has not been changed relative to the immediate prior version.

4. Status to Effect Claim Cancellation or Addition.

A claim may be cancelled by merely indicating the status of the claim as cancelled. Any new claim added by amendment must be indicated by the appropriate status identifier and shall not be underlined. Thus, added new claims of status (new), (reinstated - formerly claim #_) and (re-presented - formerly dependent claim #_) must be presented in clean version. Additional claims may be subject to additional fees, as appropriate.

5. When Grouping of Claims is Permitted.

Consecutive cancelled or withdrawn claims may be aggregated into one line of the listing (e.g. Claims 1 - 5 (cancelled)).

6. Use "Currently Amended" Status Where Applicable.

If any "previously reinstated" or "previously re-presented" claim is being amended, the status shall be indicated as "currently amended" with markings as indicated in paragraph A2, above. Multiple status identifiers should not be used for any single claim.

B. Status Identifiers that May be Used:

In order to promote uniformity and consistency, only the following eleven (11) defined status identifiers should be used to indicate the status of the claims (in parentheses after the claim number):

- | | |
|--|---|
| 1. (Original): | Claim filed with the application following the specification (i.e., not added by preliminary amendment). |
| 2. (Currently amended): | Claim being amended in the current amendment paper. |
| 3. (Previously amended): | Claim not being currently amended, but which was amended in a previous amendment paper. |
| 4. (Cancelled): | Claim cancelled or deleted from the application. |
| 5. (Withdrawn): | Claim still in the application, but in a non-elected status. |
| 6. (Previously added): | Claim added in an earlier amendment paper. |
| 7. (New): | Claim being added in the current amendment paper. |
| 8. (Reinstated - formerly claim # _): | Claim deleted in an earlier amendment paper, but re-presented with a new claim number in current amendment. |
| 9. (Previously reinstated): | Claim deleted in an earlier amendment and reinstated in an earlier amendment paper. |
| 10. (Re-presented - formerly dependent claim # _): | Dependent claim re-presented in independent form in current amendment paper. |
| 11. (Previously re-presented): | Dependent claim re-presented in independent form in an earlier amendment, but not currently amended. |

C. Example of Listing of Claims:

Claims 1-5 (cancelled)
 Claim 6 (withdrawn)
 Claim 7 (previously amended): A bucket with a handle.
 Claim 8 (currently amended): A bucket with a ~~green~~ blue handle.
 Claim 9 (withdrawn)
 Claim 10 (original): A bucket with a wooden handle.
 Claim 11 (cancelled)

Claim 12 (new): A bucket with plastic sides and bottom.

Claim 13 (previously added): A bucket having a circumferential upper lip.

Claim 14 (re-presented - formerly claim 11): A black bucket with a wooden handle.

IV. Amendments to the Specification

Amendments to the specification are to be made by presenting replacement paragraphs, sections or a substitute specification marked up to show changes made relative to the immediate prior version, as set out in 37 CFR 1.121(b). The changes should be shown by strikethrough (for deleted matter) or underlining (for added matter). No accompanying "clean" version shall be supplied. The amendments to the specification shall be presented only one time, and will not appear in successive amendment documents.

V. Amendments to the Drawings

Amendments to the drawing figures shall be made by presenting replacement figures which include the desired changes, without markings, and which comply with § 1.84. The changes shall be explained in the accompanying remarks section of the amendment paper. If the amended drawings are not approved, the applicant will be notified in the next Office action. Any amended drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even though only one figure may be amended. The figure number in the amended drawing should not be labeled as "amended."

For further information on the prototype image electronic processing of patent applications, please contact the Search and Information Resources Administration at: image.processing@uspto.gov. Any questions regarding the submission of amendments pursuant to the revised practice set forth in this notice should be directed to Elizabeth Dougherty (Elizabeth.Dougherty@uspto.gov), Gena Jones (Eugenia.Jones@uspto.gov) or Joe Narcavage (<mailto:Joseph.Narcavage@uspto.gov>). For information on the waiver or legal aspects of the program, please contact Jay Lucas (Jay.Lucas@uspto.gov) or Rob Clarke (Robert.Clarke@uspto.gov).

Date: 1/31/03

Signed: /s/
STEVEN KUNIN
Deputy Commissioner for Patent
Examination Policy

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